

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Interim application of: Steven S. Larsen  
Serial No.: 10/690,421  
Filed: 10/20/2003  
For: Endodontic Instrument  
Confirmation No.: 3835  
Group Art Unit: 3732  
Examiner: Ralph A. Lewis  
Attorney Docket No.: PLARSS

Mail Stop Petition  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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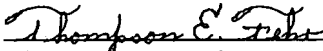
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Date of Deposit: November 20, 2007

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Appellant's Brief

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**APPELLANT'S BRIEF (37 CFR 41.37)**

This brief is in furtherance of the Notice of Appeal filed in this case on February 1, 2007.

The fees required under § 41.20 and any required petition for revival for filing this brief and fees therefor are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

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This brief contains the following items, under headings of the same name and in the order given:

REAL PARTY IN INTEREST

RELATED APPEALS AND INTERFERENCES

STATUS OF CLAIMS

STATUS OF AMENDMENTS

SUMMARY OF CLAIMED SUBJECT MATTER

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

ARGUMENT

Claims 1, 2, 5, 6, 11, 12, 15, and 16 under 35 U.S.C. § 102

Claims 3, 4, 7, 8, 13, 14, and 17 through 20 under 35 U.S.C. § 103 over Powers in View of Lovaas

Claims 1, 2, 5, 6, 11, 12, 15, and 16 under 35 U.S.C. § 103 over Powers in View of Mosley or Perry

CLAIMS APPENDIX

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The final page of this brief bears the attorney's signature.

## REAL PARTY IN INTEREST

The real party in interest is the inventor and applicant Steven S. Larsen.

## RELATED APPEALS AND INTERFERENCES

There are no other prior or pending appeals, interferences, or judicial proceedings known to Appellant or Appellant's legal representative which may be related to, directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

## STATUS OF CLAIMS

Claim 1 through 20 have been rejected.

Claims 1 through 8 and 11 through 20 are being appealed.

## STATUS OF AMENDMENTS

No amendment has filed subsequent to final rejection.

## SUMMARY OF CLAIMED SUBJECT MATTER

The only means plus function in the claims is within claim 11 and states; "a means for securely retaining a plastic cap of an endodontic file between the threaded projection of said handle and the second end of said cap." The structure corresponding to the claimed function is described in the last sentence of paragraph [0016] of the specification: "The cap 2 is then screwed closer to the first end 5 of the elongated base 3 until the plastic cap 12 is securely retained in the channel 6 between the second end 9 of the cap 2 and the projection 4, as a result of the blunt projection 4, as seen in FIG. 1, pushing against the blunt plastic cap 12, shown in FIG. 2 and both shown and described in United States patent no. 3,247,594."

With such structure for the means claim, the subject matter of independent claims 1 and 11 is the same and is explained in paragraphs [0012], [0013], [0015], and the parenthetical statement within paragraph [0016] of the Application:

**[0012]** As illustrated in FIG. 1, the present holder has a handle **1** and a cap **2**.

**[0013]** The handle **1** employs an elongated base **3** having a threaded projection **4** at a first end **5**.

...

**[0015]** The cap **2** contains a channel **6** extending through a first end **7** of the cap. The first portion **8** of the channel **6** is threaded for mating with the projection **4** of the elongated base **3**. The second end **9** of the cap **2** contains an aperture **10** through which an endodontic file **11** can project.

**[0016]** . . . . (The diameter of the aperture **10** is selected to be larger than the diameter of the endodontic file **11** but smaller than the diameter of the plastic cap **12**.) . . . .

To the preceding subject matter independent claim 19 adds the subject matter of paragraph [0014] and the first sentence of paragraph [0016]:

**[0014]** Preferably, the maximum outer diameter of the cap **2** is substantially the same as the maximum outer diameter of the elongated base **3**.

...

**[0016]** In use, an endodontic file **11** is placed so that it extends through the aperture **10** with the plastic cap **12** that is attached to the endodontic file **11** (at an end **16** opposite to the tip **14**) being in the channel **6**.

#### GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The Examiner has rejected claims 1, 2, 5, 6, 11, 12, 15, and 16 under 35 U.S.C. § 102(b) as being anticipated by Powers (United States patent no. 904,990).

Claims 3, 4, 7, 8, 13, 14, and 17 through 20 have been rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Powers in view of Lovaas (United States patent no. 5,197,880).

And claims 1, 2, 5, 6, 11, 12, 15, and 16 have been rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Powers in view of Mosley (United States patent no. 1,115,718) or Perry (United States patent no. 656,300).

## ARGUMENT

Claims 1, 2, 5, 6, 11, 12, 15, and 16 under 35 U.S.C. § 102

The Examiner, in his Office Action mailed on August 1, 2006, has rejected claims 1, 2, 5, 6, 11, 12, 15, and 16 as being anticipated by Powers (United States patent no. 904,990.)

The critical distinction between the present invention and United States patent no. 904,990 is, Appellant respectfully believes, the fact that the present invention has a handle with a blunt threaded projection at a first end which fits securely against a blunt end of the cap whereas the handle of Powers has a pointed first end and a spherical cap on the file so that the angle of the file relative to the handle can be changed.

The blunt threaded projection at the first end of the handle is apparent from FIGS. 1 and 2, the explicit language of claim 1, and the structure corresponding to the means function in claim 11 as explained above. The dependence of claims 2, 5, and 6 on claim 1 and of claims 12, 15, and 16 on claim 11 demonstrates that all of claims 1, 2, 5, 6, 11, 12, 15, and 16 have structure including the blunt projection 4, which operates in accordance with paragraph [0016] of the Application:

[0016] In use, an endodontic file 11 is placed so that it extends through the aperture 10 with the plastic cap 12 that is attached to the endodontic file 11 (at an end 16 opposite to the tip 14) being in the channel 6. (The diameter of the aperture 10 is selected to be larger than the diameter of the endodontic file 11 but smaller than the diameter of the plastic cap 12.) The cap 2 is then screwed closer to the first end 5 of the elongated base 3 until the plastic cap 12 is securely retained in the channel 6 between the second end 9 of the cap 2 and the projection

4, as a result of the blunt projection 4, as seen in FIG. 1, pushing against the blunt plastic cap 12, shown in FIG. 2 and both shown and described in United States patent no. 3,247,594.

With a handle having a pointed first end, the device of the patent could not, Appellant respectfully submits, securely retain the file. Indeed, the Powers indicates that the file is intended to be rotatable. Although Powers claims that the file can be securely retained when the cap is tightened, elementary physics, Appellant respectfully believes, shows that a pointed surface touching a spherical surface will not create secure retention.

Again in his Office Action mailed on August 1, 2006, the Examiner has stated, “. . . The present invention does possess a projection, which is more blunt than that of Powers, yet seeing as how the projection of Powers does not form a positively sharp point and ends in a small flat surface (Fig. 2), the projection of Powers is still relatively ‘blunt’ . . . .”

Appellant respectfully disagrees with the characterization by the Examiner of the end of the projection of Powers. Indeed, lines 95 through 97 on page 1 of Powers explain, “. . . the forward end of the reduced portion 12 has a terminal conical portion 13 . . . .”

Consequently, respectfully suggests that Powers cannot anticipate claims 1, 2, 5, 6, 11, 12, 15, and 16.

Claims 3, 4, 7, 8, 13, 14, and 17 through 20 under 35 U.S.C. § 103  
over Powers in View of Lovaas

Next, the Examiner has, in is Office Action mailed on August 1, 2006, stated:

Claims 3, 4, 7-10, 13, 14, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powers in view of Lovaas (U.S. 5,197,880).

Powers discloses an endodontic instrument, as described above, capable of use with many endodontic files, but fails to disclose a particular endodontic file with a blunt plastic cap and tip, which moves away from then curves back toward a centerline which it eventually crosses. Lovass discloses a tool for crimping

endodontic files, and in doing so illustrates endodontic files with the specified configuration (Fig. 5). . . .

Claims 3, 4, 7, and 8 (Appellant is not explicitly appealing the rejection of claims 9 and 10 since Appellant has noticed that they are identical to claims 19 and 20.) all depend upon claim 1; claims 13, 14, 17, and 18 all depend upon claim 11; and claims 19 and 20 both explicitly include the limitation that the threaded projection is blunt. Appellant, therefore, includes herein by reference the preceding argument with respect to 35 U.S.C. § 102. Hence, Appellant again respectfully notes that Powers does not have such a blunt projection and, consequently, cannot be modified with the file of Lovaas to create the device of claims 3, 4, 7, 8, 13, 14, 17, and 18. For this reason alone, Appellant respectfully believes that claims 3, 4, 7, 8, 13, 14, 17, and 18 are patentable and not obvious over Powers in view of Lovaas.

Yet, Appellant alone, Appellant respectfully submits, recognized the need to stabilize the needle.

Considering the recognition of such a problem, significantly, several Board judicial cases have addressed this issue.

The Board of Appeals held in *Ex parte Phair*, 1. U.S.P.Q. 133, 134 (Bd. App. 1929), that “. . . invention may exist in the discovery of the cause of a defect in an existing machine or process and applying a remedy therefor even though, after the cause is understood, the remedy would be obvious.” *See, also, Ex parte Campbell*, 211 U.S.P.Q. 575 (Bd. App. 1980).

It is easy to see the simplicity of construction and method of operation of a satisfactory operable device after it has been constructed and explained, and the courts have frequently commented upon the fact that some of the apparently simplest modifications and changes promoted such revolutionary results as to have a marked influence upon the development of the art and that in such instances, in determining the presence or absence of invention, hindsight should not be substituted for foresight. . . . the conception of doing a thin, the result of



which is new and useful, must be considered along with the actual steps of doing it in considering the presence or absence of patentability . . . .

*In re De Lancey*, 34 C.C.P.A. 849, 72 U.S.P.Q. 477, 159 F.2d 737, 741 (1947).

The discovery of a problem calling for an improvement is often a very essential element in an invention correcting such a problem; and though the problem, once realized, may be solved by use of old and known elements, this does not necessarily negative invention.

*In re Bisley*, 39 C.C.P.A. 982, 94 U.S.P.Q. 80, 197 F.2d 355, 363 (1952). *See, also, In re Hamilton*, 20 C.C.P.A. 987, 17 U.S.P.Q. 245, 64 F.2d 141 (1933).

In many inventions there are two distinct steps: first, the conception of the general result wished for; second, the discovery of a way of obtaining it. In a large majority of cases, perhaps, the first may be obvious to every one interested in a particular art, and it is the second which calls for the exercise of inventive genius. But that is not always so. It may well be that two or more machines, appliances, or tools are old and well known. Some day it dawns on some one that, if they are combined, new and useful results will be obtained. It may be that, so soon as the advantages of the combination are understood, the means of bringing it about are within the capacity of any fairly skilled mechanic. In a third class of cases inventive genius may be required both in perceiving the combination that is desirable, and in finding out a practical way of making it.

*In re Earle*, 26 C.C.P.A. 974, 41 U.S.P.Q. 24, 102 F.2d 232, 235 (1939), quoting *Rosemary Manufacturing Co. v. Halifax Cotton Mills, Inc.*, 257 F. 321, 322 (4<sup>th</sup> Cir. 1919).

Finally, the court's opinion for *In re Pennington*, 44 C.C.P.A. 789, 113, U.S.P.Q. 81, 241 F.2d 750, 754 (1957), remarked that when an essential portion of the inventor's contribution to the art resided in appreciating a deficiency in the prior art, the fact that once the problem had been appreciated, one skilled in the art might be able to construct the inventor's apparatus without the further use of the inventive faculty . . . does not detract from the inventive nature of the initial concept."

And this reasoning has been reinforced by the recent decision by the United States Supreme Court in *KSR International Co. v. Teleflex Inc. et al.*, 550 U.S. \_\_\_\_\_ (2007), no.

04-1350 (page 16 of slip opinion), wherein the Court stated, "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed."

Appellant respectfully submits that, by itself, Appellant's comprehension of the need to stabilize the needle demonstrates that claims 3, 4, 7, 8, 13, 14, 17, and 18 are patentable and not obvious over Powers in view of Lovaas.

Claims 1, 2, 5, 6, 11, 12, 15, and 16 under 35 U.S.C. § 103  
over Powers in View of Mosley or Perry

As his last ground of rejection, the Examiner has, in his Office Action mailed on August 1, 2006, declared:

Claims 1, 2, 5, 6, 11, 12, 15, and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Powers in view of Mosley (US 1,115,718) or Perry (US 656,300).

Powers discloses the holder described above but fails to disclose a projection, which is completely and entirely blunt with a flat end and no narrowing. However, such a projection is an obvious matter of design choice as demonstrated by the holders of Mosley (lines 27-38) and Perry (lines 50-68), which hold dental instruments with substantially blunt ends and still allow for angular adjustment in the same manner as Powers.

As stated in the last sentence of paragraph [0016], quoted above, the purpose of the present invention is to stabilize the endodontic needle; and, as argued with respect to the immediately preceding rejection, which argument is hereby incorporated by reference, Appellant's comprehension of the need to stabilize the needle demonstrates that the claims (in this instance, claims 1, 2, 5, 6, 11, 12, 15, and 16) are patentable and not obvious.

And a further, but independent argument, showing the patentability of claims 1, 2, 5, 6, 11, 12, 15, and 16 is that neither Mosley nor Perry, Applicant respectfully submits, shows a

substantially blunt end to be pressed against the cap of a dental instrumentality to retain such dental instrumentality.

According to line 47 through 54 on page 1 of Mosley, the end of the hand-piece contains grooves to mate with projections on the spherical member of a tool retained by the handpiece:

. . . . Fig. 4 is an enlarged detail view of the spherical tool carrying member, showing grooves formed in its surface. Fig. 5 is a detail sectional view of the upper or threaded end of the hand-piece, showing projections to engage the recesses or grooves on the spherical member of Fig. 4.

And lines 49 through 52 on page 1 of Perry clarify that the end of the handle is concave:

. . . . said handle may be screwed against said ball, the forward face of the end of the handle being concave, constituting another portion of the socket for the ball E  
. . . .

Appellant, therefore, respectfully suggests that claims 1, 2, 5, 6, 11, 12, 15, and 16 are patentable and not obvious over Powers in view of Mosley or Perry.

## CLAIMS APPENDIX

1. An endodontic instrument, which comprises:  
a handle having an elongated base with a threaded blunt projection at a first end;  
and  
a cap containing a channel extending through a first end of said cap with a first portion of the channel being threaded for mating with the projection of the elongated base of said handle, said cap possessing a side, and said cap also having a second end containing an aperture through which an endodontic file can project, the diameter of the aperture being selected to be larger than the diameter of the endodontic file but smaller than the diameter of a plastic cap attached to the endodontic file.
2. The endodontic instrument as recited in claim 1, wherein:  
the elongated base has a maximum outer diameter;  
said cap has a maximum outer diameter; and  
the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.
3. The endodontic instrument as recited in claim 1, further comprising:  
an endodontic file with a tip and also with a blunt plastic cap attached to said endodontic file at an end opposite to the tip, said endodontic file extending through the aperture in the second end of said cap and the attached plastic cap being contained within the channel of said cap.
4. The endodontic instrument as recited in claim 3, wherein:  
the elongated base has a maximum outer diameter;  
said cap has a maximum outer diameter; and

the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.

5. The endodontic instrument as recited in claim 1, wherein:

the aperture in the second end of said cap extends to the side of said cap and, on such side, is enlarged to dimensions sufficient to permit the introduction in the channel of the plastic cap attached to the endodontic file.

6. The endodontic instrument as recited in claim 5, wherein:

the elongated base has a maximum outer diameter;

said cap has a maximum outer diameter; and

the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.

7. The endodontic instrument as recited in claim 5, further comprising:

an endodontic file with a tip, with a centerline, and also with a blunt plastic cap attached to said endodontic file at an end opposite to the tip, said endodontic file extending through the aperture in the second end of said cap and the attached plastic cap being contained within the channel of said cap and said endodontic file, as said endodontic file proceeds toward the tip, initially moving away from the centerline and then curving back toward and crossing the centerline but not then again crossing the centerline.

8. The endodontic instrument as recited in claim 7, wherein:

the elongated base has a maximum outer diameter;

said cap has a maximum outer diameter; and

the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.

11. An endodontic instrument, which comprises:

a handle having an elongated base with a threaded projection at a first end;

a cap containing a channel extending through a first end of said cap with a first portion of the channel being threaded for mating with the projection of the elongated base of said handle, said cap possessing a side, and said cap also having a second end containing an aperture through which an endodontic file can project, the diameter of the aperture being selected to be larger than the diameter of the endodontic file but smaller than the diameter of a plastic cap attached to the endodontic file;

and a means for securely retaining a plastic cap of an endodontic file between the threaded projection of said handle and the second end of said cap.

12. The endodontic instrument as recited in claim 11, wherein:

the elongated base has a maximum outer diameter;

said cap has a maximum outer diameter; and

the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.

13. The endodontic instrument as recited in claim 11, further comprising:

an endodontic file with a tip and also with a plastic cap attached to said endodontic file at an end opposite to the tip, said endodontic file extending through the aperture in the second end of said cap and the attached plastic cap being contained within the channel of said cap.

14. The endodontic instrument as recited in claim 13, wherein:

the elongated base has a maximum outer diameter;

said cap has a maximum outer diameter; and

the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.

15. The endodontic instrument as recited in claim 11, wherein:

the aperture in the second end of said cap extends to the side of said cap and, on such side, is enlarged to dimensions sufficient to permit the introduction in the channel of the plastic cap attached to the endodontic file.

16. The endodontic instrument as recited in claim 15, wherein:

the elongated base has a maximum outer diameter;

said cap has a maximum outer diameter; and

the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.

17. The endodontic instrument as recited in claim 15, further comprising:

an endodontic file with a tip, with a centerline, and also with a blunt plastic cap attached to said endodontic file at an end opposite to the tip, said endodontic file extending through the aperture in the second end of said cap and the attached plastic cap being contained within the channel of said cap and said endodontic file, as said endodontic file proceeds toward the tip, initially moving away from the centerline and then curving back toward and crossing the centerline but not then again crossing the centerline.

18. The endodontic instrument as recited in claim 17, wherein:

the elongated base has a maximum outer diameter;

said cap has a maximum outer diameter; and

the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.

19. An endodontic instrument, which comprises:

a handle having an elongated base with the base possessing a threaded blunt projection at a first end and a maximum outer diameter;

a cap containing a channel extending through a first end of said cap with a first portion of the channel being threaded for mating with the projection of the elongated base of said handle, said cap possessing a side, said cap having a maximum outer diameter that is substantially the same as the maximum outer diameter of the elongated base, and said cap also having a second end containing an aperture through which an endodontic file can project, the diameter of the aperture being selected to be larger than the diameter of the endodontic file but smaller than the diameter of a plastic cap attached to the endodontic file; and

an endodontic file with a tip and also with a blunt plastic cap attached to said endodontic file at an end opposite to the tip, said endodontic file extending through the aperture in the second end of said cap and the attached plastic cap being contained within the channel of said cap.

20. An endodontic instrument, which comprises:

a handle having an elongated base with the base possessing a threaded blunt projection at a first end and a maximum outer diameter;



a cap containing a channel extending through a first end of said cap with a first portion of the channel being threaded for mating with the projection of the elongated base of said handle, said cap possessing a side, said cap having a maximum outer diameter that is substantially the same as the maximum outer diameter of the elongated base, and said cap also having a second end containing an aperture through which an endodontic file can project, the diameter of the aperture being selected to be larger than the diameter of the endodontic file but smaller than the diameter of a plastic cap attached to the endodontic file; and

an endodontic file with a tip, with a centerline, and also with a blunt plastic cap attached to said endodontic file at an end opposite to the tip, said endodontic file extending through the aperture in the second end of said cap and the attached plastic cap being contained within the channel of said cap and said endodontic file, as said endodontic file proceeds toward the tip, initially moving away from the centerline and then curving back toward and crossing the centerline but not then again crossing the centerline.

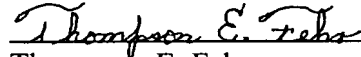
## EVIDENCE APPENDIX

There is no evidence for this appendix.

## RELATED PROCEEDINGS APPENDIX

There are no documents for this appendix since, as explained above, there are no related proceedings.

DATED this 20<sup>th</sup> day of November, 2007.

A handwritten signature in cursive script, reading "Thompson E. Fehr", is positioned above a horizontal line.

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